



# OpenPrinting Plenary

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26 April 2016

Boise, ID (HP Inc)

Joint PWG/OpenPrinting Summit F2F Meeting

- Ira McDonald (High North) - OP Chair
- Till Kamppeter (Canonical) - OP Manager

# Agenda

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- Linux Markets and Distributions (Distros)
- Linux Standard Base (LSB)
- OpenPrinting 2014
- Google Summer of Code 2014
- OpenPrinting 2015
- Google Summer of Code 2015
- OpenPrinting 2016
- Google Summer of Code 2016
- Next Steps

# Linux Markets and Distributions



- Linux servers dominated the Cloud in fall 2014!
  - 75% Linux / 23% Windows / 2% UNIX
  - <http://www.linuxfoundation.org/news-media/infographics/largest-linux-user-trends-2014>
  - <http://www.linuxfoundation.org/news-media/infographics/who-writes-linux-2015>
- Smartphone OS market share in Q4 2015
  - 83% Android / 14% iOS / 3% other – 341.5 million new phones
  - <http://www.idc.com/prodserv/smartphone-market-share.jsp>
  - <http://www.zdnet.com/article/the-five-most-popular-end-user-linux-distributions/>
- Linux – from mobile devices to enterprise servers
  - Fedora, RedHat, Ubuntu, Debian, CentOS, Mint, Arch, openSUSE
  - <http://distrowatch.com/dwres.php?resource=major> (2016)
  - <http://www.howtogeek.com/191207/10-of-the-most-popular-linux-distributions-compared/> (2015)

# Linux Standard Base (LSB)



- Common libraries on major Linux distros for portability
  - [https://wiki.linuxfoundation.org/en/LSB\\_Wiki](https://wiki.linuxfoundation.org/en/LSB_Wiki) - developers
  - <http://www.linuxfoundation.org/collaborate/workgroups/lsb> - LSB
- LSB 5.0 (June 2015) – release by Jeff Licquia
  - <http://www.linuxfoundation.org/collaborate/workgroups/lsb/lsb-50>
  - Dedicated to the memory of Christopher Yeoh
  - Specifications, development tools, and tests
  - Certification is also now available – start with Distribution Checker
- LinuxCon North America (22-24 August 2016) – Toronto
  - <http://events.linuxfoundation.org/events/linuxcon-north-america/program/about>
- *Issue – Debian dropped Linux Standard Base support*
  - *How to support distro-independent Linux driver packages?*

# OpenPrinting 2014 – 1 of 2



- OP projects for IPP Everywhere support in Linux
  - Developers – Till Kamppeter and Daniel Dressler
  - Ubuntu 14.04 (Trusty & CUPS Filters v1.0.52) – auto-setup of IPP Everywhere and IPP legacy (PS, PDF, PCL) network printers
  - Ubuntu 14.10 (Utopic Unicorn) – IPP Everywhere for legacy IPP printers (CUPS queue emulates IPP Everywhere printer)
- OP CUPS Filters – v1.0.55 (July 2014)
  - Required for Linux printing w/ CUPS 1.6 and later versions
  - Backends, filters, and other software that was formerly part of the core CUPS distribution but is no longer maintained by Apple
  - Filters for OP introduced PDF-centric printing workflow
  - Daemon to browse Bonjour broadcasts of remote CUPS printers and to auto-setup IPP network printers
  - <http://openprinting.org/download/cups-filters/>

# OpenPrinting 2014 – 2 of 2



- OP Printer Driver Repository
  - Printer Manufacturer and Open Source drivers for Linux
  - Alps, Apple, Brother, CalComp, Canon, Dell, Epson, Fuji Xerox, Genicom, Gestetner, Heidelberg, Hitachi, HP, IBM, InfoPrint, Konica-Minolta, Kyocera, Lanier, Lexmark, NEC, OCE, Oki, Panasonic, QMS, Ricoh, Samsung, Savin, Sharp, Toshiba, Xerox
  - <http://www.openprinting.org/drivers>
  - <http://www.linuxfoundation.org/collaborate/workgroups/openprinting/database/databaseintro>
- OP Google Summer of Code 2014
  - 2 projects
    - Color Management extensions for CUPS
    - IPP Everywhere for USB Printers

# Google Summer of Code 2014



- OP Color Management Ext for CUPS – CUPS Filters
  - Production Printing Workflow – extends CUPS web interface and modifies its handling of PPD files
  - Color Management support added to the filters in cups-filters - completed in CUPS Filters v1.0.56 release
  - Developer – Joe Simon
  - [Completion of original GSoC 2013 project](#)
- OP IPP Everywhere for USB Printers
  - IPP Everywhere and embedded web servers over USB
  - Cross-platform (Linux, UNIX, Windows)
  - Developer – Daniel Dressler
  - [Presentation and live demo Tuesday 12 August 2014 2pm EDT](#)

# OpenPrinting 2015 – 1 of 2



- OP projects for IPP Everywhere support in Linux
  - Developers – Till Kamppeter and Linux community
  - Ubuntu 15.04 (Vivid Vervet 04/24/15) – Linux Kernel 3.19, CUPS 2.0.2 w/ IPP Everywhere, CUPS Filters v1.0.68
  - Ubuntu 15.10 (October 2015) – IPP Everywhere extensions
  - Coming soon – IPP Everywhere in other Linux distros
- OP CUPS Filters – v1.0.68 (April 2015)
  - Filters for OP introduced PDF-centric printing workflow
    - January – v1.0.62
    - February – v1.0.63, v1.0.64, v1.0.65, v1.0.66
    - March – v1.0.67
  - Backends, filters, and other software that was formerly part of the core CUPS distribution but is no longer maintained by Apple
  - <http://openprinting.org/download/cups-filters/>



# OpenPrinting 2015 – 2 of 2



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  - <http://www.openprinting.org/drivers>
  - <http://www.linuxfoundation.org/collaborate/workgroups/openprinting/database/databaseintro>
- OP Google Summer of Code 2015 – no projects
  - Linux Foundation was not accepted as a GSoC mentor in 2015!

# Google Summer of Code 2015

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- OP Google Summer of Code 2015 – no OP projects
  - Linux Foundation was not accepted as a GSoC mentor in 2015!

# OpenPrinting 2016 – 1 of 2



- OP projects for IPP Everywhere support in Linux
  - Developers – Till Kamppeter and Linux community
  - Ubuntu 15.10 (October 2015) – Wily Werewolf
  - Ubuntu 16.04 (April 2016) – Xenial Xerus – 6<sup>th</sup> LTS release
  - Coming soon – IPP Everywhere in other Linux distros
- OP CUPS Filters – v1.8.3 (23 March 2016)
  - Filters for OP introduced PDF-centric printing workflow
    - January – v1.6.0, 1.7.0, 1.8.0, 1.8.1
    - February – v1.8.2
    - March – v1.8.3
  - Backends, filters, and other software that was formerly part of the core CUPS distribution but is no longer maintained by Apple
  - <http://www.openprinting.org/download/cups-filters/>

# OpenPrinting 2016 – 2 of 2



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  - <http://www.openprinting.org/drivers>  
<http://www.linuxfoundation.org/collaborate/workgroups/openprinting/database/databaseintro>
- *Issue – Debian dropped Linux Standard Base support*
  - *How to support distro-independent Linux driver packages?*
- OP Google Summer of Code 2016 – muPDF Renderer
  - 2 students accepted by GSoC for OP projects

# Google Summer of Code 2016



- Add MuPDF support to CUPS Filters for a lightweight mobile printing stack
  - Currently cups-filters supports Ghostscript and Poppler as PDF renderers – keep these options
  - Add support for MuPDF (from Artifex, creators of Ghostscript) as a new lightweight renderer for cups-filters
  - Modify all filters which need a PDF renderer (pdftops, pdftoraster, pdftoijs, pdftoopvp, perhaps also pdftopdf)
  - Add support for switching between renderers at run time
  - Make binary packages of cups-filters suitable for systems of different form factors
  - 2 Developers accepted by GSoC on Friday 22 April 2016
    - Pranjal Bhor (from India)
    - Kevin Naughton Jr. (from New York)
  - [Critical path for high-quality lightweight mobile printing](#)

# Next Steps

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- Call for Participation
  - OP is cost-effective for printer vendor support of Linux
- Collaboration of PWG and OP
  - OP JTAPI supports PWG Print Job Ticket in abstract model
    - OP JTAPI backends for PWG JDFMAP prototype?
  - IPP Everywhere
  - IPP Shared Infrastructure Extensions (Cloud print)
  - IPP FaxOut, IPP Scan
  - IPP System Service
- OP monthly teleconferences on Tuesdays
  - OP Call on Tue 10 May 2016 12pm US EDT (OPS review)
  - OP Call on Tue 7 June 2016 12pm US EDT (tentative)